

Remarks**Application Status and Disposition of Claims**

The Action indicates that claims 7-10, 20, and 21 are pending. Of the pending claims, the Examiner considered claims 8, 20, and 21, maintaining the restriction requirement with respect to the remainder of the claims.

With this Amendment, Applicants amend claim 20 and cancel claim 21 and the nonelected claims. Applicants add new claims 22 and 23, which recite that (R)- or (S)-1-methylalkyl malonic acid having an optical purity of 95% or 99% e.e. or greater is obtained by the method. The new claims find support in the third full paragraph of page 41 of the specification.

No new matter has been added.

Information Disclosure Statements

Applicants thank the Examiner for indicating consideration of all of the documents filed in an Information Disclosure Statement on September 22, 2010.

Claim Rejections – 35 U.S.C. § 112, Second Paragraph

The Action rejects claim 20 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite for referring to an “alcohol” but reciting 2-pentanone and 2-hexanone. The Examiner correctly notes that 2-pentanol and 2-hexanol were intended, and this amendment corrects the error.

Claim Rejections – 35 U.S.C. § 103

The Office Action rejects claims 8, 20, and 21 over Prout et al. (Journal of Organic Chemistry, 1962, 27, p. 1488-1490) when considered with Francke (U.S. Patent No. 4,853,217). Applicants respectfully disagree with the rejection for the reasons that follow.

Initially, Applicants note that this rejection is maintained and was addressed in the prior response. Applicants submit that those comments are applicable here but are not repeated for the sake of brevity. Applicants reiterate those comments by reference to the prior response.

The outstanding Action discusses the disclosure of Prout et al. and concludes that discussion by noting that the difference between the present invention and the disclosure of Prout et al. is that instead of a bromide leaving group in the alkylating agent as employed by Prout et al., a sulfonyloxy leaving group is employed in the presently claimed invention. The Action notes that Francke discloses a process that is "essentially similar" to that of Prout et al. except that Francke converts the required alcohol to the corresponding sulfonate ester before using it to alkylate sodium malonate.

The Action asserts that one skilled in the art would be motivated to modify Prout et al.'s process by activating the optically active alcohol by conversion to the sulfonate ester, as taught by Francke, in order to avoid the racemization of the alcohol as taught by Prout et al. when PBr_3 is employed. The Action asserts that because the carbon-oxygen bond is not broken in the formation of the sulfonate ester as it is in the formation of the bromide, there would have been a reasonable expectation of success.

Applicants submit that the rejection should be withdrawn for the following reasons. As the Office knows, to establish a *prima facie* case of obviousness, there must be some reason or motivation to modify a reference teaching or to combine it with another teaching, so as to arrive at a claimed invention. The Action finds motivation to modify Prout et al.'s teaching in Prout et al.'s racemization of the alcohol. Applicants respectfully submit that, even if taking Prout et al. as true for what the Office asserts, this does not amount to a motivation or reasonable basis for combining, or replacing, Prout et al.'s teachings with those of Francke. Applicants respectfully submit that this is, at best, recognition of a problem.

Prout et al., however, does not offer a solution to the problem. Indeed, and again, taking Prout et al. as true for what the Office asserts, Prout et al. does not explain that phosphorus tribromide is the source of the problem. Thus, there is nothing in Prout et al. that would lead a

person skilled in the art to replace the PBr_3 with anything, and certainly nothing in Prout et al. that would lead to the choice of a sulfonyloxy leaving group.

In Francke, the Action finds the missing sulfonyloxy leaving group, but there is no explanation by the Office as to why one skilled in the art would have turned to Francke in the first place. Again, Prout et al. does nothing to suggest a replacement of PBr_3 and certainly does not suggest a sulfonyloxy leaving group. And Francke – again taking the Action's assertions as correct – provides only a step of converting to a sulfonate ester, but it makes no reference to PBr_3 , to the lack of racemization resulting from the sulfonate ester conversion, or to achieving any level of optical purity. In short, there is nothing that would lead a person skilled in the art to Francke to solve the problem of racemization from Prout et al.

Applicants respectfully submit that there is nothing in either Prout et al. or Francke that would have led to the combination with the other. It appears that the Office has fallen victim to a hindsight approach to concluding obviousness of the presently claimed invention. In this regard, Applicants recognize that any judgment obviousness is in a sense necessarily a reconstruction based on hindsight reasoning (*In re McLaughlin* 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971)), but this is not an excuse for combining reference teachings based only on Applicants' disclosure. In this case, there is *nothing* in either document that would lead to the *combination* proposed by the Action. Mere recognition of a problem (by Prout et al.) does not suggest a particular solution or a place where such solution may be found.

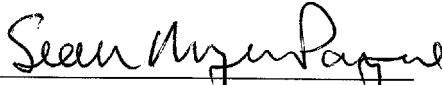
Applicants again note that the Office has not even addressed the optical purity limitation required by Applicants' claims. As the Action fails to mention this feature, it seems the Office must have concluded that this feature inherently results from the proposed combination of Prout et al. with Francke. But as the Office surely knows, showing the presence of a recited feature on a theory of inherency requires that the missing feature *necessarily* be present – it is not enough that the missing feature might be present sometimes or under certain circumstances – it must necessarily result from the proposed combination. Applicants respectfully submit that the Office has failed to provide any reasonable basis for concluding that such features would necessarily result.

Still further, the Action finds that there would have been an expectation of success based on the assertion that "the carbon-oxygen bond is not broken in the formation of the sulfonate ester [whereas] it is in the formation of the bromide." Applicants note that the presently claims are directed to a "method for producing (R)- or (S)-1-methylalkyl malonic acid having an optical purity of 90% e.e. or greater." Thus, it is unclear how the Office concludes that there would be any expectation of "success" when Prout et al. clearly disclosed that the bromide was "considerably racemized" and Francke fails to make any mention of achieving optical purity. That is, there is a great deal of difference between "considerably racemized" and "an optical purity of 90% e.e. or greater" and Francke does nothing to bridge that gap. Again, it seems the only expectation of success is in Applicants' invention and the Office's analysis is based on viewing the art through the lens of Applicants' invention.

In view of the foregoing remarks and amendments, Applicants respectfully submit that the claims are nonobvious over the cited art, and respectfully request withdrawal of the rejections.

Should the Examiner have any questions, please contact the undersigned at the telephone number provided below.

Respectfully submitted,
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May 23, 2011
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